

Chapter 8

Fire Protection Design Standards and Policies Revised December 1999

Chapter 8, Fire Protection Requirements, provides guidelines in the placement of fire hydrants, fire lanes, emergency access provisions, and building sprinkler systems.

Section 8.1

FIRE PROTECTION REQUIREMENTS DESIGN STANDARDS AND POLICIES REVISED DECEMBER 1999

CHAPTER 8 FIRE PROTECTION

SECTION 8.1

FIRE PROTECTION REQUIREMENTS

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SECTION 8.1 FIRE PROTECTION REQUIREMENTS

8-101 GENERAL COMMENTS

Fire Protection requirements are determined by the Fire Department, utilizing the 1997 Uniform Fire Code along with the City Ordinance #3100, which amends certain section of this code. It is the intent of the Fire Department to establish requirements consistent with nationally recognized practices for the safeguarding, to a reasonable degree, of life and property from hazards of fire and explosion arising from the storage, handling, and the use of hazardous substances, materials, and devices and from conditions hazardous to life and property arising from the use or occupancy of buildings or premises.

8-102 PLACEMENT OF FIRE HYDRANTS

- A. The spacing of fire hydrants is to be measured along the street or roadway in which a fire hose would be laid. Generally, this spacing is measured along the curb line.
- B. The spacing of fire hydrants in developments consisting of lots with single-family residences on each lot must be no greater than 1200-feet on center when street grade is less than 9%; and no greater than 600-feet on center when street grade is greater than 9%.
- C. The spacing of fire hydrants in commercial and industrial areas and in multi-family residential developments such as apartments and condominiums must be no greater than 700 feet. This spacing applies to interior, on-site locations for hydrants as well as to locations along public right-of-way.
- D. Two-way, reflective, blue, raised pavement markers must be provided to identify the location of fire hydrants, in accordance with City of Scottsdale Standard Detail 2363. These markers are readily available from businesses providing highway marking materials.

8-103 FIRE LANES

After reviewing the plan for the proposed development, the Fire Department may require that fire lanes be provided around structures for fire fighting access. If fire lanes are needed, the following criteria for the lanes apply.

- A. The minimum width of a fire lane is 20 feet. See Figure 8.1-1 for other lane width requirements.
- B. The fire lane surface must be suitable for all-weather use, usually 2" AC over 6" ABC. Minimum 50,000 lb. gross vehicle weight.
- C. The minimum vertical clearance for fire department apparatus is 13'-6".
- D. The radius of the outside edge of the lane on a turn must be no less than 45-feet for commercial and 40.5-feet for residential. See Figure 8.1-2.
- E. The fire lanes must be posted in accordance with the City of Scottsdale Standard Detail 2365.

8-104 EMERGENCY ACCESS PROVISIONS

After reviewing the plan for a proposed development, the Fire Department may require that an access be provided for fire fighting and emergency vehicle use in addition to the planned public access ways. Such an emergency access would normally be closed and locked, but any lock placed on an emergency access gate must be approved by the Fire Department. If a development is planned with only one public access point, the Fire Department will almost always require an emergency access to insure that an emergency vehicle can reach the interior of the development when the normal access is blocked. Emergency access ways must always be secured by an easement. City of Scottsdale Standard Detail 2364 describes the requirement for the construction and identification of emergency access ways.

8-105 BUILDING SPRINKLER SYSTEMS

The water system design must accommodate the requirement for building sprinkler systems. The following subparagraphs describe the requirements:

- A. Sprinkler systems are required for:
 - 1. All new commercial or industrial buildings (including basements).
 - 2. All multi-family residential structures (apartments, condominiums, time-share developments, etc.).
 - 3. All parking area structures (underground or aboveground).
 - 4. All single-family residences constructed after January 1, 1986.
- B. The remote Fire Department connection for a sprinkler system must be installed in such a manner that it is from four feet to eight feet from the back of curb of a public or private roadway. The location of the sprinkler system connection must be unobstructed and readily accessible to the Fire Department. See Figure 8.1-3 and the

lower right corner of City of Scottsdale Standard Detail 2363. This connection must also be within an appropriate distance of a fire hydrant as determined by the Fire Department.

- C. Pavement markers for Fire Department sprinkler system connections must be provided as shown in the lower right corner of City of Scottsdale Standard Detail 2363.

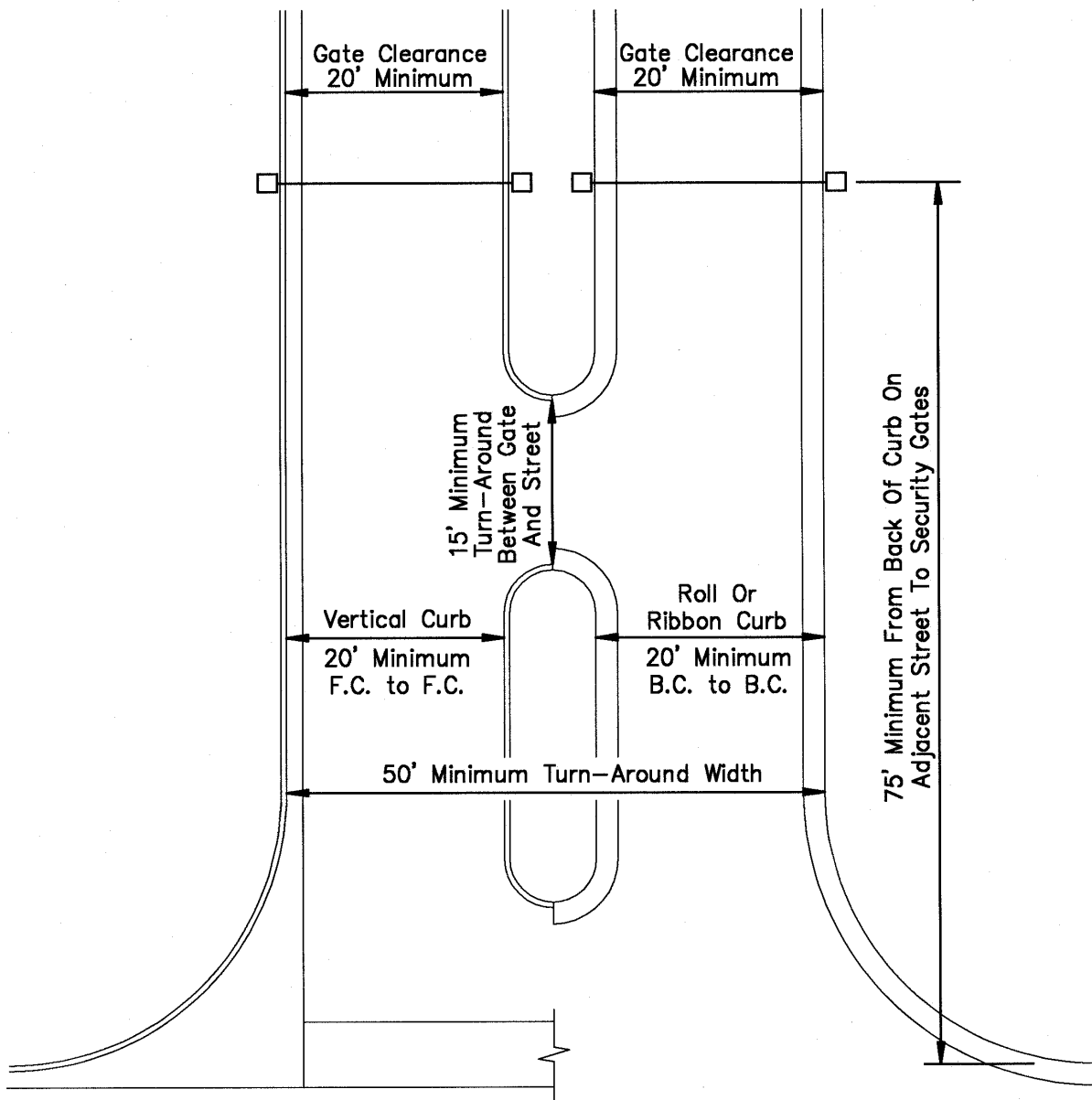
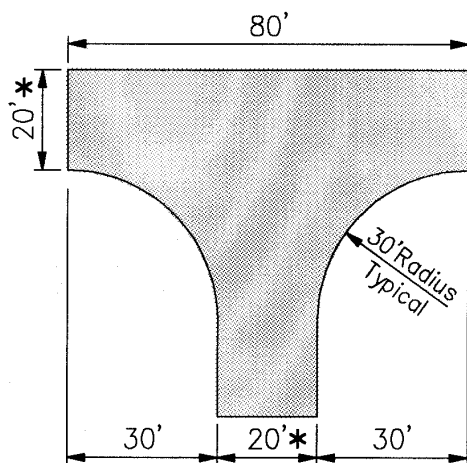
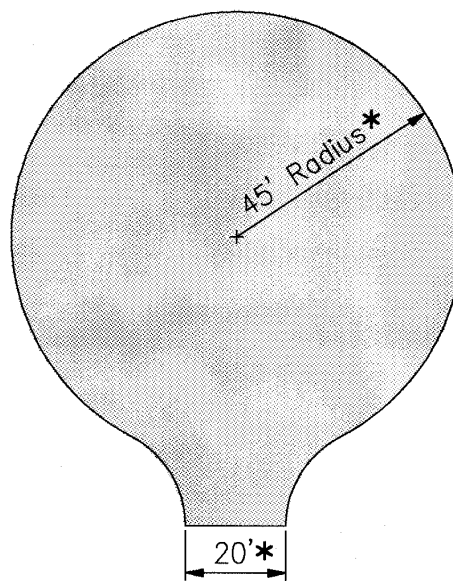


FIGURE 8.1-1
Minimum Requirements For Gated
Entrances To Residential Subdivisions



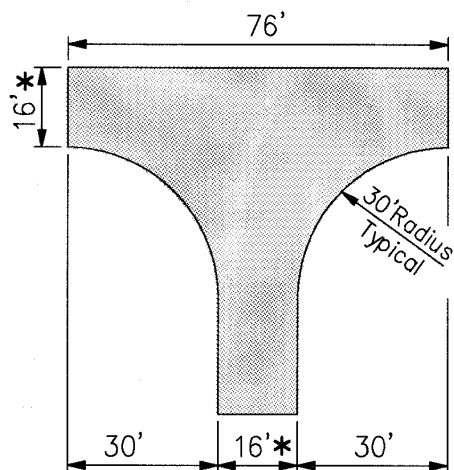
T-TYPE



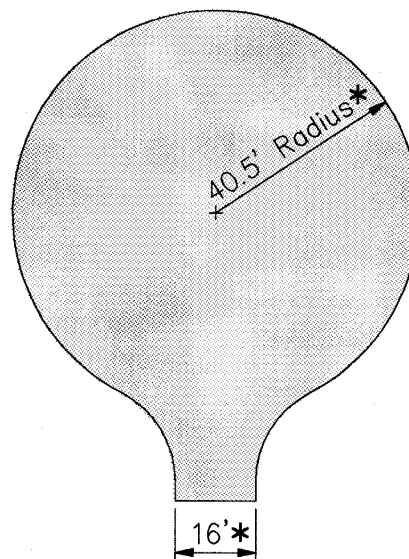
CUL-DE-SAC

- * To Back Of Curb For Roll Or Ribbon Curb.
To Face Of Curb For Vertical Curb.

COMMERCIAL



T-TYPE



CUL-DE-SAC

RESIDENTIAL

FIGURE 8.1-2
Minimum Requirements For
Fire Department Turn-Arounds

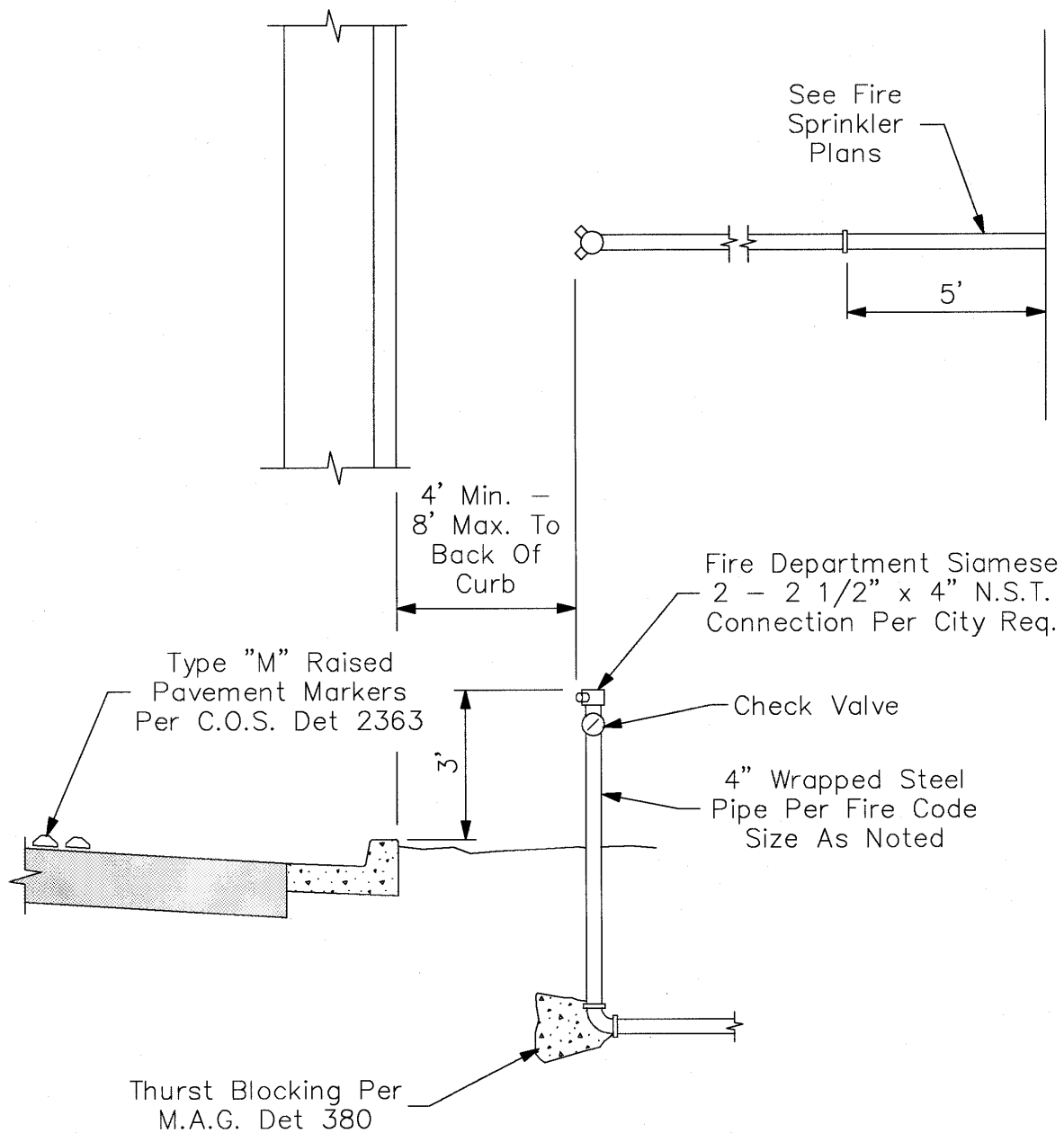


FIGURE 8.1-3
Fire Department Siamese Connection